REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The rejection of claims 1-3 under 35 U.S.C. §102 as allegedly anticipated by newly cited Deshpande '858 is respectfully traversed.

Deshpande seems to teach and/or suggest no more than the prior art already acknowledged in applicants' specification (e.g., see page 1, lines 31-34 describing prior art techniques where a server starts by transmitting the lowest quality stream and then switches up to a higher rate if and when it finds the network can support it).

Referring to Deshpande at Fig. 2 and related text, it appears that Deshpande merely begins by sending the base stream 40 and then, as bandwidth permits, successively transmits a first enhancement stream 42 followed, if possible, by a second enhancement stream 44, etc.

By contrast, applicants have described and claimed a start-up mode technique where one initially transmits at least an initial portion of a single first part having no alternatives therein relating to different resolutions. Next, data is received indicative of available transmission capacity for such initial transmission in a start-up mode. Next, while still in the start-up mode, a choice must be made by choosing one from among a plurality of alternative independent second parts corresponding to respectively different resolutions for immediate transmission following steps (a) and (b) while still in a start-up mode as a function of the data indicative of available transmission capacity received in step (b).

That is, applicants specifically claim a step of "choosing" one from available alternative independent second parts. There is no such choosing possible in Deshpande since inevitably if there is available bandwidth, the first enhancement 42 will be sent and only if there is still further available bandwidth will the second enhancement

stream 44 be transmitted. That is, Deshpande does not "choose" which one of plural different enhancement streams 42, 44 is to be sent immediately following the sending of the base stream 40. Instead of a start-up mode for quickly achieving an initial transmission of the second part at a resolution best suited to available transmission capacity, Deshpande appears to describe a system which is constantly testing and sending as many different layers as possible given the channel bandwidth that happens to then be available (e.g., for on-going use throughout the transmission of a given layered-data set).

Claim 1 has been amended so as to emphasize the start-up mode aspects of applicants' claimed invention and the fact that the "choosing" step of claim 1 is, for example, without teaching or suggestion in Deshpande.

Applicants' invention involves "transmitting data over a network having initially undetermined transmission capacity" whereas Deshpande teaches at paragraph [0045] "a target bandwidth rate that was predetermined for the scheduler."

Whereas the claim 1 method seeks to determine available transmission capacity on the network, the scheduler of Deshpande merely has to subtract "an average bandwidth already used by the scheduler 50 in transmitting the previous layers" from the bandwidth allocated to the transmission scheduler – i.e., Deshpande does not look at the network bandwidth, but only to an amount of bandwidth allocated to the scheduler. At paragraph [0038], Deshpande indicates that the scheduler then "determines if there is bandwidth available to the transmission scheduler 50 for sending additional layers." Deshpande clarifies that "[t]here will be bandwidth available to the transmission scheduler 50 if transmitting the previous layers did not use all of the bandwidth allocated to the transmission scheduler."

Dependent claim 3 is particularly directed to applicants' "catch-up" mode which permits the somewhat initially delayed second part to "catch-up" with the initial first part that was preferentially transmitted during the initial stages of the start-up mode. The Examiner alleges that such is also taught by Deshpande at Fig. 4 (element 226) and at paragraph [0040]. However, Fig. 4 at box 226 merely instructs that an enhancement layer is to be transmitted after discovering available bandwidth at decision point 222. It is also noted that this bandwidth decision is based upon an average bandwidth of plural layers already transmitted (i.e., as an on-going matter rather than any initial start-up phase *per se*). Furthermore, paragraph [0040] merely describes the on-going sequential testing/transmission of ever higher resolution layers. There is no "catching-up" involved since the base layer and all related enhancement layers are inherently already "synchronized" and/or at least not in need of any special synchronization.

Indeed, the Examiner's attempt to verbalize this allegation is based entirely upon faulty logic. First of all, the Examiner asserts that enhancement layers are sent only after the base layer finishes transmission. Next, the Examiner asserts that "therefore they are necessarily transmitted preferentially to further transmission of the base layer." Of course, it makes no sense to talk about further transmission of the base layer in this context since the base layer has already been completely transmitted!

Applicants' claim 3 relates to the transmission of only a leading part of the chosen second part which corresponds only to the extent of the single first part that happens to have already been transmitted. Since the applicants' single first part continues to be transmitted, it makes sense to talk about temporarily preferentially transmitting the selected second part so that it can catch up with and be synchronized with its corresponding first part.

Of course, that is not the case with Deshpande where, according to the Examiner's own description, the base layer has already finished transmission before any enhancement layers are even contemplated for transmission. In short, it does not make any sense in the context of Deshpande to talk about the enhancement layers "catching-up" with the base layer.

The rejection of claim 8 under 35 U.S.C. §103 as allegedly being made "obvious" based on Aharoni '694 is also respectfully traversed.

Aharoni describes a scheme for download of video and, in particular, selecting a video file to download depending on detected network bandwidth. According to Aharoni, video data is used to test the network bandwidth and, necessarily, is sent with a relatively low bandwidth (as illustrated in Fig. 10 of Aharoni), at least in an initial "scanned" phase and until a measure of the true bandwidth has been achieved. As set out in Aharoni at 13 21-36, the number of bytes is increased over time until saturation of the network bandwidth is detected.

The applicants' claim 8 invention provides a significant advantage over Aharoni by removing the need to send video files at initially low, slowly increasing bandwidths. According to claim 8, the network bandwidth is determined before video transmission commences, thereby allowing all video files to be sent at full bandwidth.

The Examiner recognizes that Aharoni does not teach initially transmitting audio data over a communications network. The Examiner alleges that the audio data of claim 8 need not be related to the video data of claim 8. However, the audio and video data are so limited in the preamble (and now in the body as well).

Furthermore, the audio and video data of claim 8 are identified as representing an audio-visual presentation. The audio and video data are clearly related, according to claim 8.

Aharoni does not teach use of audio data to determine available transmission capacity over the communications link before transmission of video data and then using the determination of available transmission capacity in selecting one of plural corresponding but different resolution digitized video data to transmit.

The Examiner states that it was known to transmit audio without video as audio streaming was known at the time of the invention. However, claim 8 does not relate to audio streaming *per se,* but to transmitting related audio and video data representing an audio-visual presentation. The Examiner's arguments regarding audio streaming do not relate to applicants' claimed invention. The Examiner has not demonstrated that it was known to transmit an audio part of an audio-visual presentation in advance of the video part of the same presentation, as presently claimed.

The present inventors have identified and addressed a problem with sending a video over a network where the sender does not know what data rate is supported by the network. The present inventors have devised a scheme exploiting different types of data (i.e., audio and video) in which transmission of the audio data is exploited to enable an indication to be received as to the transmission capacity of the network before transmission of any video data. This allows an informed decision to be made as to which of a number of alternative versions of the video part to send. The invention thus provides for delivery of data with optimum use of the available network resources.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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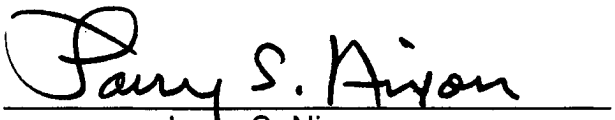
By: 

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